

104.3 Stoichiometry (powder form)

These SRMs are defined as primary, working, and secondary standards in accordance with recommendations of the Analytical Chemistry Section of the International Union of Pure and Applied Chemistry [Ref. Analyst **90**, 251 (1965)]. These definitions are as follows:

Primary Standard:

a commercially available substance of purity $100 \pm 0.02\%$ (Purity 99.98 + %).

Working Standard:

a commercially available substance of purity $100 \pm 0.05\%$ (Purity 99.95 + %).

Secondary Standard:

a substance of lower purity which can be standardized against a primary grade standard.

Technical Contact: kenneth.pratt@nist.gov and Technical Contact for SRMs 17e, 917b: michael.welch@nist.gov

PLEASE NOTE: The tables are presented to facilitate comparisons among a family of materials to help customers select the best SRM for their needs. For specific values and uncertainties, the certificate is the only official source.

SRM	Description	Unit Size (in g)	Certified Use	Stoichiometric Purity (mass fraction, in %)
17e	Sucrose	60	Purity Polarimetric Standard	99.950
8040	Sodium Oxalate	60	Reductometric Standard	99.972
83d	Arsenic Trioxide	60	Reductometric Standard	99.9926
84k	Potassium Hydrogen Phthalate	60	Acidimetric Standard	99.9911
136e	Potassium Dichromate	60	Oxidimetric Standard	99.984
350b	Benzoic Acid	30	Acidimetric Standard	99.9978
351	Sodium Carbonate	50	Acidimetric Standard	99.9796
723d	Tris(hydroxymethyl)aminomethane	50	Acidimetric Standard	99.924
917b	D-Glucose (Dextrose)	50	Purity Polarimetric Standard	99.7
951	Boric Acid	100	Acidimetric and Boron Isotopic Value	100.00
987	Strontium Carbonate	1	Assay and Isotopic Values	99.98
999b	Potassium Chloride	30	Assay Values for: 1. Potassium Chloride 2. Potassium 3. Chloride	99.977 52.4379 47.5519

Values in parentheses are not certified and are given for information only.

* [As current supplies are depleted, conductivity SRMs 3194 \(10000 mS/cm\), 3195 \(100000 mS/cm\) and 3196 \(20000 mS/cm\) are being replaced by molality-based NIST traceable primary reference materials derived from any issuance of SRM 999 Potassium Chloride at conductivity levels of 1409.33 mS/cm, 108621 mS/cm, and 12825.7 mS/cm, respectively. For further information see: \[Reference Link\]\(#\)](#)